

A B S T R A C T

A BANDPASS FILTER WITH CARRIER FREQUENCY REDUCTION

5 The invention provides a bandpass filtering method
in which two frequency transpositions are performed in
parallel on an input signal (SE) for filtering using
respective first and second upstream mixing signals (SM1,
SM2) that are substantially in phase quadrature so as to
10 obtain respective first and second transposed signals
(ST1, ST2), and the two transposed signals are filtered
respectively by two lowpass filters (F1, F2), the
frequency of the transposition signals (ω_0) and the
passband (B/2) of the low-pass filters being related to
15 the frequency of the input signal (ω_e) and to the
passband desired for the bandpass filter, then respective
frequency transpositions are performed on the first and
second filtered transposed signals (STF1, STF2) using two
respective downstream mixing signals, and the sum or the
20 difference of the two signals obtained in this way is
taken, the frequency of the output mixing signals (SMV1,
SMV2) is selected to be different from the frequency of
the first and second mixing signals so that the output
signal is transposed into a desired frequency range, the
25 method being characterized in that a common oscillator
(LO) is used which is coupled with a first phase shifter
(MTM) to produce the upstream mixing signals and which is
coupled with a second phase shifter (MTV) to produce the
downstream mixing signals, and in that the phase shifters
30 are used in opposite manner on the first and second
signals so that each of said first and second signals
(VT1, VT2) receives the phase-advanced output signal from
one of the two phase shifters and the phase-delayed
output signal from the other of the two phase shifters.

35

Translation of the title and the abstract as they were when originally filed by the Applicant. No account has been taken of any changes that may have been made subsequently by the PCT Authorities acting ex officio, e.g. under PCT Rules 37.2, 38.2, and/or 48.3.

09980027.022702